

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Potassium dicyanoargentate

Product Number : 379166
Brand : Aldrich

Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption, Irritant

GHS Classification

Acute toxicity, Oral (Category 2)
Acute toxicity, Inhalation (Category 2)
Acute toxicity, Dermal (Category 2)
Skin irritation (Category 2)
Serious eye damage (Category 1)

GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H300 + H310 : Fatal if swallowed or in contact with skin
H315 : Causes skin irritation.
H318 : Causes serious eye damage.
H330 : Fatal if inhaled.

Precautionary statement(s)

P260 : Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 : Wash hands thoroughly after handling.
P280 : Wear protective gloves/ eye protection/ face protection.
P284 : Wear respiratory protection.
P302 + P350 : IF ON SKIN: Gently wash with plenty of soap and water.
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 : Immediately call a POISON CENTER or doctor/ physician.

Other hazards

Contact with acids liberates very toxic gas.

HMIS Classification

Health hazard: 3
Flammability: 0
Physical hazards: 0

NFPA Rating

Health hazard: 4
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be fatal if inhaled. Causes respiratory tract irritation.
Skin May be fatal if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion May be fatal if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Potassium silver(I) cyanide
Formula : C₂AgKN₂
Molecular Weight : 199.00 g/mol

Component	Concentration
Potassium dicyanoargentate	
CAS-No. 506-61-6	-
EC-No. 208-047-0	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Not flammable or combustible.

Suitable extinguishing media

Dry powder

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Potassium oxides, Silver/silver oxides, Hydrogen cyanide (hydrocyanic acid)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Do not store near acids.

Light sensitive. Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
Potassium dicyanoargentate	506-61-6	TWA	0.01 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	5 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
Remarks	Skin designation			
		TWA	0.01 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Argyria varies			
		TWA	0.01 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	5 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	0.01 mg/m ³	USA. NIOSH Recommended Exposure Limits
		C	4.7 ppm 5 mg/m ³	USA. NIOSH Recommended Exposure Limits
	10 minute ceiling value			

Personal protective equipment**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash protection
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	powder
Colour	white

Safety data

pH	no data available
Melting point/freezing point	no data available
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	no data available
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapor density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Materials to avoid

Do not store near acids., Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Potassium oxides, Silver/silver oxides, Hydrogen cyanide (hydrocyanic acid)

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

no data available

Inhalation LC50

no data available

Dermal LD50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation

Skin - rabbit - Irritating to skin. - 24 h - Draize Test

Serious eye damage/eye irritation

Eyes - rabbit - Risk of serious damage to eyes. - 24 h - Draize Test

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	May be fatal if inhaled. Causes respiratory tract irritation.
Ingestion	May be fatal if swallowed.
Skin	May be fatal if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver)., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects

no data available

Additional Information

RTECS: TT5775000

12. ECOLOGICAL INFORMATION**Toxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN number: 1588 Class: 6.1 Packing group: I
Proper shipping name: Cyanides, inorganic, solid, n.o.s.
Reportable Quantity (RQ): 1 lbs
Marine Pollutant: No
Poison Inhalation Hazard: No

IMDG

UN number: 1588 Class: 6.1 Packing group: I EMS-No: F-A, S-A
 Proper shipping name: CYANIDES, INORGANIC, SOLID, N.O.S. (Potassium dicyanoargentate)
 Marine Pollutant: Marine pollutant

IATA

UN number: 1588 Class: 6.1 Packing group: I
 Proper shipping name: Cyanides, inorganic, solid, n.o.s. (Potassium dicyanoargentate)

15. REGULATORY INFORMATION**OSHA Hazards**

Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption, Irritant

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

	CAS-No.	Revision Date
Potassium dicyanoargentate	506-61-6	1993-04-24

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Potassium dicyanoargentate	506-61-6	1993-04-24

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Potassium dicyanoargentate	506-61-6	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Potassium dicyanoargentate	506-61-6	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
Potassium dicyanoargentate	506-61-6	1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION**Further information**

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